

#### ABSTRACT OF THE DISCLOSURE

To position and fix the gradient coil assembly in a basic field magnet assembly of a nuclear magnetic resonance tomograph, an annular clamp element is clamped on a surface of the gradient coil assembly between the gradient coil assembly and the basic field magnet assembly. The clamp element has a conical internal surface which is form-fittingly in contact with a similar surface of the gradient coil assembly, so as to provide a self-centering force on the gradient coil assembly and to maintain the gradient coil assembly with an annular gap between the external surface of the gradient coil surface and the interior surface of the basic field magnet assembly.